

CLAIMS

1. Produce decontamination apparatus comprising a chamber (10) for accepting
produce to be decontaminated and/or sterilised, and means
5 (30,30a,30b,32,48,50) for producing a free radical saturated atmosphere within
the chamber (10) so that, in use, the free radical saturated atmosphere
decontaminates and/or sterilises the produce.
2. Apparatus as claimed in claim 1, wherein the means for producing a free radical
saturated atmosphere comprises one or more first atomising sprayheads (30a), a
10 supply (32) of ozonised liquid which is supplied to the first sprayheads (30a),
and means (48,50) for breaking down the ozone forming part of the ozonised
liquid once discharged from the first sprayheads.
3. Apparatus as claimed in claim 2, wherein the means for breaking down the
ozone is in the form of an ultraviolet light emitting device (48,50).
- 15 4. Apparatus as claimed in claim 2 or claim 3, wherein the means for producing a
free radical saturated atmosphere further comprises means (30b,34) for
catalysing the breakdown of hydrogen peroxide formed from the ozone of the
ozonised liquid once discharged.
- 20 5. Apparatus as claimed in claim 4, wherein the means for catalysing the
breakdown of the hydrogen peroxide includes one or more second atomising
sprayheads (30b), and a supply (34) of catalysing liquid which is supplied to the
second sprayheads (30b), the catalysing liquid catalysing the breakdown of the
hydrogen peroxide formed from the ozone of the ozonised liquid once
discharged from the second sprayheads (30b).

6. Apparatus as claimed in claim 5, wherein the catalysing liquid includes ferric ions.
7. Apparatus as claimed in any one of claims 4 to 6, wherein the means for producing a free radical saturated atmosphere further comprises means for catalysing the breakdown of the ozone of the ozonised liquid once discharged.
8. Apparatus as claimed in claim 8, wherein the means for catalysing the breakdown of the ozone includes a coating on the interior of the chamber (10), the coating having one or more ozone catalysing materials.
9. Apparatus as claimed in claim 8, wherein at least one of the ozone catalysing materials is titanium oxide, titanium dioxide, or manganese oxide.
10. Apparatus as claimed in any one of the preceding claims, wherein the chamber (10) houses two vertically spaced conveyor belts (24,26).
11. Apparatus as claimed in claim 10, wherein the vertical spacing between the conveyor belts (24,26) is adjustable.
12. Apparatus as claimed in any one of the preceding claims, wherein the chamber (10) is open to atmospheric pressure.
13. Apparatus substantially as hereinbefore described with reference to the accompanying drawings.
14. Produce decontaminated using produce decontamination apparatus as claimed in any one of the preceding claims.